



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/038,872

12/31/2001

David Allan Collins

SAMS01-00188

6634

7590
Docket Clerk
P.O. Box Drawer 800889
Dallas, TX 75380

09/24/2007

EXAMINER

PEREZ, ANGELICA

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

09/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/038,872

Applicant(s)

COLLINS, DAVID ALLAN

Examiner

Perez M. Angelica

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over He (He et al.; US Patent No.: 6,671,259 B1) in view of Koning (Koning et al.; US 2003/0,005,350 A1).

Regarding claim 27, He teaches of a controller for allocating call identity values to call connections associated with a switch (column 10, lines 43-46; where a processor has control functions. See also, figure 4, item 145; columns 5 and 6, lines 57-67 and 1-29, respectively), the switch capable of handling call connections between calling devices and called devices on a plurality of trunk lines associated with the switch (columns 1 and 2, lines 6-10 and 18-19; where the data calls are established from client to server), the controller comprising: N call application nodes capable of executing a plurality of identity server processes that allocate call identity values to the call connections (columns 1 and 2, lines 24-30 and 16-38, respectively; where the nodes are the servers and where the allocation of call identity values requires certain processes to be performed in order to complete the allocation); and a load sharing group, selecting one of a first and second identity server processes to allocate a call identity value to a new call connection associated with the call identity request

according to a load distribution algorithm, where the selected identity server process is associated with the new call connection until the new call connection is ended (column 3, lines 49-54 and 58-61, respectively and column 4, lines 1-5; e.g., "selected server performs the task required by the client system"; where the distribution of calls is done for new calls until they end and where ending a call connection, giving a broad interpretation, can be a call ended by a user or by a failure in the system), where the first identity server application comprises a first primary-backup group server application (column 12, lines 55-65; e.g., "...a second LBS selector can act as a backup to a first LBS selector..."), where the first identity server process comprises a first primary-backup identity server group (column 3, lines 30-39; where group of servers 9a comprise servers that perform the same services, tasks, therefore, backing up the service of the original server employed for a certain service or task. Also, column 12, lines 55-65; e.g., "...if LBS selector F1 becomes inoperable, LBS selector B1 is activated and thereby quickly replaces the LBS selector F1"), a first primary identity server application, executing on a first call application node and a first backup identity server application associated with the first primary identity server application (column 12, lines 55-65; e.g., "...if LBS selector F1 becomes inoperable, LBS selector B1 is activated and thereby quickly replaces the LBS selector F1"), and where, responsive to a failure of the first primary identity server application, the first backup identity server application assumes the role of first primary identity server application (column 3, lines 30-39; where group of servers 9a comprise servers that perform the same services, tasks, therefore, backing up the service of the original server employed for a certain

Art Unit: 2618

service or task. Also, column 12, lines 55-65; e.g., "...if LBS selector F1 becomes inoperable, LBS selector B1 is activated and thereby quickly replaces the LBS selector F1").

He teaches of a load-balancing network that comprises various servers that can perform the same task, including identification of the calls, He does not specifically teach of a backup server for a first primary server.

In related art concerning a failover management system, Koning teaches where when a first primary server fails, a back up assumes the role of first primary identity server (paragraphs 21 and 22, where one of the services or applications includes an identity application for connections).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine He's controller for allocating call identity values to call connections associated with a switch with Koning's back-up server in order to take over when the primary server fails, as taught by Koning. In addition, the He's reference deals with a load balancing system that uses backup servers to distribute user's when the primary servers are fully loaded or have failed; therefore, the load is balanced and back-up servers will be ready to take over when primary servers are fully loaded or have failed. The Koning's reference has primary servers and back-up servers that replace the primary servers when failure occurs, the rationale to combine both system would be that both systems ultimate goal is to maintain connections by providing back-up servers that are going to perform the same functions as the primary servers and maintain communication connections until a call is completed.

Regarding claim 28 He and Koning teach all the limitations of claim 27. He further teaches where the first identity server process allocates call identity values having a first contiguous range (column 3, lines 31-33; where "group *a*" conforms to a range of same functions) and the second identity server application allocates call identity values having a second contiguous range different than the first contiguous range (column 3, lines 31-39; where "group *b*" performs the same functions corresponding to its range).

Regarding claim 29, He and Koning teach all the limitations of claim 27 He further teaches where the load distribution algorithm distributes new call identity requests in an alternating manner between the first and second identity server processes (column 13, lines 11-14; where "round robin fashion" corresponds to "alternating manner").

Regarding claim 30, He and Koning teach all the limitations of claim 27. He further teaches where the load distribution algorithm selects between the first and second identity server processes according to a current processing load of the first identity server process and a current processing load of the second identity server process (column 9, lines 52-60; e.g., "due to load"; column 7, lines 67 and 1-6).

Regarding claim 31, He and Koning teach all the limitations of claim 30. He further teaches where the load distribution algorithm selects between the first and second identity server processes in order to maintain the current processing load of the first identity server application at a level substantially equal to the current processing

Art Unit: 2618

load of the second identity server application (column 11, lines 1-10; where "load balance" corresponds to a "substantially equal load").

3. Claims 32-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over He and Koning, and further in view of Colby (Colby et al.; US Pat. No.: 2004/0,039,820 A1).

Regarding claim 32, He and Koning teach all the limitations of claim 27.

He and Koning do not specifically teach where call state information associated with the first primary identity server application is mirrored to the first backup identity server application.

In related art concerning a method and apparatus for packet flow directivity based on request and server attributes, Colby teaches where call state information associated with the first primary identity server application is mirrored to the first backup identity server application (paragraph 0015; e.g., "mirroring of critical data in distributed data centers...").

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine He's and Koning's controller for allocating call identity values to call connections associated with a switch with Colby's mirrored first primary identity server in order to provide backup in case of a partial communication failure as well as to allow transparent removal of servers, as taught by Colby.

Regarding claim 33, He, Koning and Colby teach all the limitations of claim 32. He further teaches where the first backup identity server application is executing on the first call application node (column 12, lines 55-59; where the servers correspond to different selectors, nodes).

Regarding claim 34, He, Koning and Colby teach all the limitations of claim 32. He further teaches where the first backup identity server application is executing on a second call application node (column 13, lines 5-11; operating in the same sector, node).

Regarding claim 35, He, Koning and Colby teach all the limitations of claim 27. He further teaches where the second identity server application comprising a second primary-backup identity server application node (column 12, lines 43-50; where client systems sectors comprise their backup servers) and a second backup identity server application associated with the second primary identity server application (column 10, tables 1, 2 and 3; where the applications are associated with their respective servers and backup systems as well as with other servers).

Regarding claim 36, He, Koning and Colby teach all the limitations of claim 35. Colby further teaches where call state information associated with the second primary identity server application is mirrored to the second backup identity server application (0013, lines 1-5 and paragraph 0015).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine He's and Koning's controller for allocating call identity values to call connections associated with a switch with Colby's mirrored second primary identity server in order to provide backup in case of a partial communication failure as well as to allow transparent removal of servers, as taught by Colby.

Regarding claim 37, He, Koning and Colby teach all the limitations of claim 36. Colby further teaches where the second backup identity server application is executing on the second call application node (paragraph 0013, lines 1-5 and paragraph 0015).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine He's and Koning's controller for allocating call identity values to call connections associated with a switch with Colby's mirrored second primary identity server in order to provide backup in case of a partial communication failure as well as to allow transparent removal of servers, as taught by Colby.

Regarding claim 38, He, Koning and Colby teach all the limitations of claim 36. He further teaches where the second backup identity server application is executing on a call application node separate from the second call application node (column 13, lines 5-11; operating in the same sector, node).

4. Claims 39-43 and 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over He and Koning, and further in view of Ueno (Ueno et al.; US Patent No.: 5,754,959)

Regarding claim 39, He teaches of a controller for allocating call identity values to call connections associated with a switch (column 10, lines 43-46; where a processor has control functions), the switch capable of handling call connections between calling devices and called devices on a plurality of trunk lines associated with the switch (column 1, lines 6-10; where the data calls are established from client to server), the controller comprising: N call application nodes capable of executing a plurality of identity server processes that allocate call identity values to the call connections (columns 1 and

Art Unit: 2618

2, lines 24-30 and 16-38, respectively; where the nodes are the servers and where the allocation of call identity values requires certain processes to be performed in order to complete the allocation); and a load sharing group, selecting one of a first and second identity server processes to allocate a call identity value to a new call connection associated with the call identity request according to a load distribution algorithm, where the selected identity server process is associated with the new call connection until the new call connection is ended (column 3, lines 49-54 and 58-61, respectively and column 4, lines 1-5; e.g., "selected server performs the task required by the client system"; where the distribution of calls is done for new calls until they end and where ending a call connection, giving a broad interpretation, can be a call ended by a user or by a failure in the system), where the first identity server application comprises a first primary-backup group server application (column 12, lines 55-65; e.g., "...a second LBS selector can act as a backup to a first LBS selector..."), where the first identity server process comprises a first primary-backup identity server group (column 3, lines 30-39; where group of servers 9a comprise servers that perform the same services, tasks, therefore, backing up the service of the original server employed for a certain service or task. Also, column 12, lines 55-65; e.g., "...if LBS selector F1 becomes inoperable, LBS selector B1 is activated and thereby quickly replaces the LBS selector F1"), a first primary identity server application, executing on a first call application node and a first backup identity server application associated with the first primary identity server application (column 12, lines 55-65; e.g., "...if LBS selector F1 becomes inoperable, LBS selector B1 is activated and thereby quickly replaces the LBS selector F1"), and

where, responsive to a failure of the first primary identity server application, the first backup identity server application assumes the role of first primary identity server application (column 3, lines 30-39; where group of servers 9a comprise servers that perform the same services, tasks, therefore, backing up the service of the original server employed for a certain service or task. Also, column 12, lines 55-65; e.g., "...if LBS selector F1 becomes inoperable, LBS selector B1 is activated and thereby quickly replaces the LBS selector F1").

He teaches of a load-balancing network that comprises various servers that can perform the same task, including identification of the calls, He does not specifically teach of a backup server for a first primary server.

In related art concerning a failover management system, Koning teaches where when a first primary server fails, a back up assumes the role of first primary identity server (paragraphs 21 and 22, where one of the services or applications includes an identity application for connections).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine He's controller for allocating call identity values to call connections associated with a switch with Koning's back-up server in order to take over when the primary server fails, as taught by Koning.

He does not specifically teach of a wireless network comprising a plurality of base stations capable of communicating with a plurality of mobile stations in a coverage area of the wireless network; and a mobile switching center coupled to the plurality of base stations and to a public switched telephone network by a plurality of trunk lines.

Art Unit: 2618

Koning teaches of nodes, which can be considered as BS; however, the examiner would like to bring another reference that explicitly shows BS's.

In related art concerning mobile communication systems with a load balancing feature, Ueno teaches of a wireless network comprising (figure 1): a plurality of base stations capable of communicating with a plurality of mobile stations in a coverage area of the wireless network (figure 1, items MS and BS); and a mobile switching center coupled to the plurality of base stations and to a public switched telephone network by a plurality of trunk lines (figure 1, item 1).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine He's and Koning's controller for allocating call identity values to call connections associated with a switch with Ueno's wireless network in order to equalize loads in the wireless system, as taught by Ueno.

Regarding claim 40 He, Koning and Ueno teach all the limitations of claim 39. He further teaches where the first identity server process allocates call identity values having a first contiguous range (column 3, lines 31-33; where "group a" conforms to a range of same functions) and the second identity server application allocates call identity values having a second contiguous range different than the first contiguous range (column 3, lines 31-39; where "group b" performs the same functions corresponding to its range).

Regarding claim 41, He, Koning and Ueno teach all the limitations of claim 39. He further teaches where the load distribution algorithm distributes new call identity requests in an alternating manner between the first and second identity server

processes (column 13, lines 11-14; where "round robin fashion" corresponds to "alternating manner").

Regarding claim 42, He, Koning and Ueno teach all the limitations of claim 39. He further teaches where the load distribution algorithm selects between the first and second identity server processes according to a current processing load of the first identity server process and a current processing load of the second identity server process (column 9, lines 52-60; e.g., "due to load"; column 7, lines 67 and 1-6).

Regarding claim 43, He, Koning and Ueno teach all the limitations of claim 42. He further teaches where the load distribution algorithm selects between the first and second identity server processes in order to maintain the current processing load of the first identity server application at a level substantially equal to the current processing load of the second identity server application (column 11, lines 1-10; where "load balance" corresponds to a "substantially equal load").

Regarding claim 47, He, Koning and Ueno teach all the limitations of claim 39. He further teaches where the second identity server application comprising a second primary-backup identity server application node (column 12, lines 43-50; where client systems sectors comprise their backup servers) and a second backup identity server application associated with the second primary identity server application (column 10, tables 1, 2 and 3; where the applications are associated with their respective servers and backup systems as well as with other servers).

Regarding claim 48, Koning and Ueno teach all the limitations of claim 47. Colby further teaches where call state information associated with the second primary identity

Art Unit: 2618

server application is mirrored to the second backup identity server application (0013, lines 1-5 and paragraph 0015).

Regarding claim 49, He in view of Colby teaches all the limitations of claim 48. Colby further teaches where the second backup identity server application is executing on the second call application node (paragraph 0013, lines 1-5 and paragraph 0015).

Regarding claim 50, He in view of Colby teaches all the limitations of claim 48. He further teaches where the second backup identity server application is executing on a call application node separate from the second call application node (column 13, lines 5-11; operating in the same sector, node).

5. Claims 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over He, Koning and Ueno, and further in view of Colby (Colby et al.; US Pat. No. 2004/0,039,820 A1).

Regarding claim 44, He, Koning and Ueno teach all the limitations of claim 39.

He, Koning and Ueno do not specifically teach where call state information associated with the first primary identity server application is mirrored to the first backup identity server application.

In related art concerning a method and apparatus for packet flow directivity based on request and server attributes, Colby teaches where call state information associated with the first primary identity server application is mirrored to the first backup identity server application (paragraph 0015; e.g., "mirroring of critical data in distributed data centers...").

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine He's, Koning's and Ueno's controller for allocating call identity values to call connections associated with a switch with Colby's mirrored first primary identity server in order to provide backup in case of a partial communication failure as well as to allow transparent removal of servers, as taught by Colby.

Regarding claim 45, He, Koning, Ueno and Colby teach all the limitations of claim 44. He further teaches where the first backup identity server application is executing on the first call application node (column 12, lines 55-59; where the servers correspond to different selectors, nodes).

Regarding claim 46, He, Koning, Ueno and Colby teach all the limitations of claim 44. He further teaches where the first backup identity server application is executing on a second call application node (column 13, lines 5-11; operating in the same sector, node).

Response to Arguments

6. Applicant's arguments with respect to claims 27-50 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angelica Perez whose telephone number is 571-272-7885. The examiner can normally be reached on 6:00 a.m. - 1:30 p.m., Monday - Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571) 272-4177. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either the PAIR or Public PAIR. Status information for unpublished applications is available through the Private PAIR only. For more information about the pair system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Information regarding Patent Application Information Retrieval (PAIR) system can be found at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.



Angelica Perez
Examiner



MATTHEW ANDERSON
SUPERVISORY PATENT EXAMINER

Art Unit 2618

September 14, 2007